



MAPEFLOOR FINISH 450
Two-Component, Aliphatic, Polyurethane Topcoat

SECTION 07 18 00
Traffic Coatings

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products for topping of concrete, including the following:
 - 1. Topcoat.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience manufacturing similar products.
- B. Installer Qualifications: Minimum 2 years' experience installing similar products.

1.5 PRE-INSTALLATION MEETINGS

- A. Convene at least two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.



1.8 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Product Performance:

Solids content	100%
VOCs	10 g per L
Viscosity – ASTM D2196	1,000 to 2,200 cps
Tensile strength – ASTM D412	1,800 to 2,200 psi (12.4 to 15.2 MPa)
Elongation – ASTM D412	90% to 115%
- B. Acceptable Manufacturer:

MAPEI North America
1144 E. Newport Center Drive; Deerfield Beach, FL 33442
Toll-Free for CRS Technical Service: Tel. 888-365-0614
Email: CRS@mapei.com
Web: www.mapei.com
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
- D. Substitutions: Not permitted.

2.2 TOPCOATS

- A. Polyurethane Topcoat: Two-component, polyurethane topcoat specifically designed to provide a protective wear coat for elevated concrete surfaces where MAPEI Mapefloor parking deck system is utilized.
 - 1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Mapefloor Finish 450.

2.3 MISCELLANEOUS MATERIALS

- A. Portland Cement: ASTM C150, Type I, II or III unless otherwise indicated.
- B. Water: Potable.

2.4 MIXES

- A. General: Mix products, in clean containers, according to manufacturer's written instructions.
 - 1. Do not add water, thinners or additives unless recommended by manufacturer.
 - 2. When practical, use manufacturer's premeasured packages to ensure that materials are mixed in proper proportions. When premeasured packages are not used, measure ingredients using graduated measuring containers; do not estimate quantities or use shovels or trowels as units of measure.
 - 3. Do not mix more materials than can be used within time limits recommended by manufacturer. Discard materials that have begun to set.



PART 3 EXECUTION

3.1 EXAMINATION

- A. Properly prepared, elevated concrete substrates that have been mechanically prepared using engineer-approved methods to an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #3 – primed with Primer SN [NA] or Mapefloor PU Primer [NA] and coated with Mapefloor PU 400 FC basecoat.

3.2 PREPARATION

- A. Mapefloor Finish 450 must be applied over properly prepared, elevated concrete surfaces that have been primed with Primer SN [NA] or Mapefloor PU Primer [NA] and coated with Mapefloor PU 400 FC basecoat. For complete details on surface preparation, refer to Mapefloor Installation Manual.

3.3 MIXING

Before product use, take appropriate precautions. Refer to the Safety Data Sheet (SDS) for details.

- A. Premix the Part A resin to a homogenous consistency (for 2 to 3 minutes) using a low-speed drill (at 300 to 450 rpm) and a Jiffy mixing paddle.
- B. Pour the Part B hardener into the Part A container and mix thoroughly for 2 to 3 minutes to a smooth, homogenous consistency and color. Do not mix at high speeds, which can trap air within the mixed material.

3.4 INSTALLATION

Read all installation instructions thoroughly before installation.

- A. Allow Mapefloor PU 400 FC to cure for at least 3 hours at 75°F (24°C) or until tack-free. Then pour the mixed Mapefloor Finish 450 onto the previous layer of Mapefloor PU 400 FC in a ribbon pattern.
- B. Spread Mapefloor Finish 450 evenly and uniformly with a 1/4" (6 mm) notched squeegee between 12 and 15 mils wet film thickness (WFT) or 107 to 134 sq. ft. per U.S. gal. (2.60 to 3.29 m² per L) dependent on the Mapefloor system being installed. Consult the Mapefloor Parking Deck Systems Installation Manual for complete system application rates.
- C. Back-roll to achieve desired thickness and proper coverage.
- D. Immediately broadcast silica quartz sand aggregate of 16 to 30 mesh size – evenly distributed – into the wet coating at a rate of 10 to 15 lbs. per 100 sq. ft. (0.49 to 0.73 kg per m²), and back-roll. Allow 5 to 6 hours for curing.
- E. For complete application instruction on the use of Mapefloor Finish 450 as an intermediate coat and topcoat for the various Mapefloor parking deck systems, please consult the Mapefloor Parking Deck Systems Installation Manual.

END OF SECTION